

REMARKS

The non-final Office Action mailed November 5, 2003 has been fully considered. Claims 1-27 are pending in the application. Claims 1-27 were rejected.

In paragraph 2 on page 2 of the Office Action, claims 1-27 were rejected under 35 U.S.C. § 102(b) over Dennis et al. (U.S. Patent No. 5,471,564).

Applicants respectfully traverse the § 102(b) rejection. To establish a *prima facie* case for rejection under 35 U.S.C. § 102, all claim limitations must be taught, disclosed or suggested by the cited reference. In this instance, the requirements are not present and a *prima facie* rejection fails under 35 U.S.C. § 102(b) because the Office Action does not cite a reference that teaches, discloses or suggests all the claim limitations of Applicants' application.

The instant application requires at least "[a] data structure disposed before a page in a document data stream for referencing and identifying resource objects, the data structure providing an indication of resource objects to be made available prior to attempting to print the page" be provided.

According to the present invention, a data structure for a document to be printed is provided. The data structures define the document's layout and composition features. Multiple documents may be collected into a print file. A print file may optionally contain, at its beginning, an "inline" resource group that contains resource objects required for print. Alternatively, the resource objects may be stored in a resource library that is accessible to the print server, or they may be resident in the printer. Thus, a presentation document can reference resources that are to be included as part of the document to be presented, which are not present within the document as transmitted within the data stream.

Each page has associated environment information that specifies page size and that identifies resources required by the page. Resource objects are named objects or named collection of objects that can be referenced from within the document. Resource objects may need to be utilized in numerous places within a document or within several documents.

For example, assume an image I1 is required on page P1. If I1 is identified as part of P1, then, assuming I1 is not present in the printer, I1 must be downloaded with the P1 page data. The download time therefore takes up part of the P1 print window. This works without a print-underrun as long as the print window is large enough to accommodate the I1 transmission time. A print underrun occurs when the printer is ready to print a page, but lacks at least a resource that is to be printed.

Thus, print problems are solved by providing a structure at the beginning of a document description that identifies any complex resources required by the document. Print underruns are avoided by ensuring that complex resources are downloaded to the printer before the first page of the job is initiated.

Thus, claim 1 recites that “[a] data structure disposed before a page in a document data stream for referencing and identifying resource objects, the data structure providing an indication of resource objects to be made available prior to attempting to print the page.”

The Office Action states that a data structure, as recited above, is disclosed by Dennis at column 11, lines 3-7. However, Dennis does not suggest “[a] data structure disposed before a page in a document data stream for referencing and identifying resource objects, the data structure providing an indication of resource objects to be made available prior to attempting to print the page.” Rather, Dennis merely discloses that a graphics chart that is to be printed in a

document may be located at the end of the document and a pointer that points to the graphics chart is inserted in the document at the location where the graphics chart should be inserted.

The Office Action cites Fig. 2 and column 12, lines 47-50 as disclosing selecting resources to be used in printing a document. According to Dennis, Page Description Language (PDL) may be converted into draw primitives which may generically be called a Render Primitives List (RPL). The resource assembler 208 selects resources from the resource storage area 206 which will be required to print the document.

Thus, according to Dennis, the resource assembler determines ALL of the resources that are required to print the ENTIRE document. However, as the document becomes large, identifying all of the resources prior to beginning printing as taught by Dennis is too time consuming to be practical. Further, Dennis requires additional processing to analyze the generated document and to identify all resources for the entire document.

Accordingly, Dennis fails to suggest a data structure disposed before a page in a document data stream for referencing and identifying resource objects. Applicants' data structure disposed before a page in a document data stream for referencing and identifying resource objects enables a document to be self-describing in terms of resources and therefore the resource assembler is obsoleted.

Moreover, in view of the above comments, Dennis does not reference resource objects. Because Dennis fails to teach, disclose or suggest resource environment groups, Dennis does not teach, disclose or suggest, "a print server, coupled to the document generator, the print server determining whether the print data stream includes a resource environment group and downloading resource objects identified by the resource environment group when the print data stream includes a resource environment group" from claim 24. Similarly, because resource

environment groups are absent in Dennis, the cited reference cannot teach, disclose or suggest “downloading resource objects identified by the resource environment group when the print data stream includes a resource environment group” from claim 27.

Because Dennis fails to teach, disclose or suggest all elements of the instant application, the Section 102(b) rejection is improper and should be withdrawn.

Dependent claims 2-7, 9-14, 16-21, 23 and 25 are also patentable over the reference because they incorporate all of the limitations of the corresponding independent claims 1, 8, 15, 22, 24, 26 and 27. Further, dependent claims 2-7, 9-14, 16-21, 23 and 25 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 2-7, 9-14, 16-21, 23 and 25 are patentable over the cited patent.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicants, David W. Lynch, at 651-686-6633 Ext. 116.

CRAWFORD MAUNU PLLC
1270 Northland Drive, Suite 390
Saint Paul, MN 55120
(651) 686-6633

Respectfully submitted,

By: 

Name: David W. Lynch

Reg. No.: 36,204